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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/917,175	07/27/2001	Sanjay Kuttappa	DSCK-1220	9642

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EXAMINER	
SUHOL, DMITRY	

ART UNIT	PAPER NUMBER
3712	

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/917,175	KUTTAPPA ET AL.	
	Examiner	Art Unit	
	Dmitry Suhol	3712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) *13-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 19-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Declaration filed under 37 CFR 1.131

The declaration filed on 8/25/03 under 37 CFR 1.131 has been considered but is ineffective to overcome the Lutz et al (U.S. Patent No. Number 6,475,104) reference. The declaration fails to overcome the Lutz reference since the declaration fails to adequately provide for the requirement of conception/reduction to practice. In other words in order for the applicants to prove conception, the invention must be more than a vague idea, it requires that the invention is made sufficiently clear that one of ordinary skill in the art could reduce it to practice without undue experimentation. In the instant case, as support of reduction to practice, applicants provide a memo dated January 20, 2000 (roughly five days prior to the filling of the Lutz reference) which appears to state in item (2) that the applicants are still trying to determine the amount of Tungsten to be added to a golf ball. In other words, it would appear that testing and experimentation was still ongoing at the above mentioned date. Applicants declaration states that the memo only refers to a specific type of golf ball utilizing a specific type of covering and center and thus the reduction to practice has been demonstrated by the declaration. The examiner points out that the claims DO NOT make any distinction regarding the type off center nor the covering used therein. Therefore the declaration has not established a reduction to practice since the allowance of the claims would also encompass the specifics of the testing golf ball utilizing the specific center and cover which clearly testing was still ongoing at that date.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Nakahara et al '253. Lutz discloses a thread wound golf ball containing most of the elements of the claims, including with reference to claim 1, a center (figure 2, element 10), a thread winding layer (figure 2, element 20) comprising at least one thread, a cover disposed over a core (figure 2, element 25). Lutz further discloses a thread comprised of a thermoset material as required by claim 2 (col. 4, lines 37-39 and col. 5, lines 29-34), a thread comprised of a thermoplastic elastomer material as required by claim 3 (col. 4, lines 37-39 and col. 5, lines 29-34), a thread compounded to have at least one high specific gravity filler having a specific gravity greater than 5.6 as required by claims 4-6 (col. 8, lines 46-49 and line 61-62), a specific high gravity filler being tungsten as required by claims 7-12 (col. 9, line 6).

Although Lutz discloses most of the elements of the claims, as stated above, the reference fails to explicitly teach a thread layer having a specific gravity of greater than 1.2 as required by claims 1-3. However, Nakahara discloses a golf ball which teaches that it is known to provide a golf ball with a layer (2) between the center (1) and the cover (3) that has a specific gravity greater than 1.2 (see abstract and figure 1).

Therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention, to have provided particulars of the layer between the center and the cover (i.e. at least one thread) of Lutz with a specific gravity greater than 1.2 for the purpose of increasing the moment of inertia. Additionally, it should be pointed out that Lutz clearly teaches the addition of a high specific gravity filler to a thread layer for the purpose of controlling the moment or inertia (col. 8, lines 49-51), much like the applicant and Nakahara, therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention to have a thread layer with a specific gravity of greater than 1.2, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). Additionally, a thread layer having a specific gravity of greater than 1.2 appears to be a design choice in that applicant does not disclose any critical need for such a value (see applicant's specification page 3, lines 16-19), in other words it appears that applicants are admitting that their invention would work with a thread layer being within a wide specific gravity range. It should further be noted that although Lutz may not expressly disclose a thread layer having a specific gravity value, the range for a thread layer having a specific gravity value between the workable ranges as disclosed by the applicant is well know in the art. It is further pointed out that Table – 2 does not appear to support applicants need for a thread layer having a specific gravity of 1.2 as the table shows thread layers having a specific gravity of 0.725 and 0.777. Applicants data table further shows no advantage to having applicants disclosed thread layer. There is absolutely no comparative data between applicants invention and other

known golf balls or other golf balls having attributes that would point out the benefit of applicants ball design.

Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al ' 717. Morgan discloses a golf ball containing most of the elements of the claims including, wrapping at least one thread compounded and mixed with a high specific gravity filler of steel (col. 6, lines 61-62 and col. 9, lines 53-58), disposing a cover upon the core (col. 7, lines 2-4). The use of tungsten, as required by claim 22, would have been obvious since Morgan clearly discloses that tungsten is well known and used filler material in golf ball construction (col. 8, line 31) and it has a specific gravity greater than 7.6 which is a major criteria for selecting a filler in the golf ball of Morgan 9col. 9, lines 53-56).

Claims 23-25, 27-28 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Nakahara et al '253 and Kakiuchi et al '142. Lutz discloses most of the elements of the claims, as stated above, and further including use of a filler with a weight of 0.1% to 30% of the thread (col. 8, lines 51-53). However Lutz fails to explicitly teach a thread winding layer having a specific gravity greater than 1.2 as required by claim 23, a ball having a calculated Moment of Inertia from 12.4 to 13.4 ($g\text{-}in^2$) as require by claim 25, a center of a ball ranging from 1.00 to 1.48 inches as required by claim 27, a center weighing from 15 to 35 grams as required by claim 28 and a specific gravity of a center of a golf ball being 1.2 to 1.3 as required by claim 33.

However, Nakahara discloses a golf ball which teaches that it is known to provide a golf ball with a layer (2) between the center (1) and the cover (3) that has a specific gravity greater than 1.2 (see abstract and figure 1). While Kakiuchi discloses a wound golf ball teaching, a ball center within a range of 1.00 to 1.48 inches (figure 2, element 1), a center weighing within a range of 15 to 35 grams (figure 2, element 1) with a specific gravity within a range of 1.2 to 1.3 (figure 2, element 1). Therefore it would have been obvious to one having ordinary skill in the art to manufacture the golf ball of Lutz with the above characteristics for the purpose of providing a durable golf ball with a longer flight/carry, initial velocity and roll distance that is within the limitations of the allowable tolerances (per regulation play). Additionally, since Lutz is clearly concerned with the Moment of Inertia of his golf ball (col. 8, lines 49-51) it would have been obvious to provide a golf ball with a calculated Moment of Inertia from 12.4 to 13.4 ($g\text{-}in^2$) for the purpose of providing a with a good spin rate and spin decay, especially since golf balls with a moment of inertia in the above range are known in the art (i.e. applicants Table – 2, Ball #1) and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233. It should be further noted that, it would have been obvious to have a thread layer with a specific gravity of greater than 1.2, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch,* 617 F. 2d 272, 205 USPQ 215 (CCPA 1980). Additionally, a thread layer having a specific gravity of greater than 1.2 appears to be a design choice in that applicant does not disclose any critical need for such a

value (see applicant's specification page 3, lines 16-19), in other words it appears that applicants are admitting that their invention would work with a thread layer being within a wide specific gravity range. It should further be noted that although Lutz may not expressly disclose a thread layer having a specific gravity value, the range for a thread layer having a specific gravity value between the workable ranges as disclosed by the applicant is well know in the art. It is further pointed out that Table – 2 does not appear to support applicants need for a thread layer having a specific gravity of 1.2 as the table shows thread layers having a specific gravity of 0.725 and 0.777. Applicants data table further shows no advantage to having applicants disclosed thread layer. There is absolutely no comparative data between applicants invention and other known golf balls or other golf balls having attributes that would point out the benefit of applicants ball design.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104, Nakahara et al '253 and Kakiuchi et al '142, as stated above, and further in view of Umezawa et al '885. Although Lutz, as modified by Kakiuchi, discloses most of the elements of the claims, as stated above, the reference fails to explicitly teach a thread layer having a thickness in the range of 0.05 to 0.35 inches. However, Umezawa discloses a golf ball which teaches that it is known to produce a golf ball with a thread layer falling in the range of 0.05 to 0.35 inches (see abstract). Therefore it would have been obvious to produce a golf ball with a thread layer thickness being in the range of

0.05 to 0.35 inches for the purpose of a variety of spin and velocity characteristics of a golf ball, especially since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Claims 29-32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104, Nakahara et al '253 and Kakiuchi et al '142, as stated above, and applicants own admission. Lutz, as modified by Nakahara and Kakiuchi, discloses most of the elements of the claims, as stated above, however Lutz fails to explicitly teach a thread layer having a thickness from 0.05 to 0.35 inches as required by claim 26, a core size ranging from 1.48 to 1.68 inches as required by claim 29, a core weighing from 30 to 40 grams as required by claim 30, a diameter of a golf ball being from 1.58 to 1.78 inches as required by claim 31, a ball weighing 40 to 50 grams as required by claim 32, and a thread layer weighing from 2.5 to 25.0 grams as required by claim 34. However, applicants Table – 2 clearly teaches that golf balls are know to have a core size that can range from 1.48 to 1.68 (balls #1 - #5), a golf ball core weight being in the range of 30 to 40 grams (balls #1 - #5), a golf ball diameter being in the range of 1.58 to 1.78 inches (balls #1 - #5) which is further known to a be standard range for golf balls diameters, a golf ball having a weight in the range of 40 to 50 grams (balls #1 - #5) and golf balls having a thread layer weight in the range of 2.5 to 25.0 grams (ball #1). Therefore it would have been obvious to one having ordinary skill in the art to manufacture the golf ball of Lutz with the above characteristics for the purpose of providing a durable golf ball

with a longer flight/carry, initial velocity and roll distance that is within the limitations of the allowable tolerances (per regulation play). Furthermore, the ranges for the above characteristics would have been obvious since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Kakiuchi et al '142 and applicant's own admission. Lutz teaches that it is known to use a high specific gravity filler (including tungsten) having a specific gravity greater than 5.6 with a weight percentage of 0.1% to 30% (col. 8, lines 46+) in any layer of a golf ball, including the thread layer as stated above and in col. 8, lines 46-48 and col. 9, line 6. Kakiuchi teaches that it is known to manufacture a golf ball comprising a thread with a specific gravity greater than 0.94 and a thread winding layer with a specific gravity in the range of 0.7 to 1.25 (col. 2, lines 54-56). Therefore it would have been obvious to manufacture the golf ball of Lutz with thread specifics, as taught by Kakiuchi, for the purpose of manufacturing a golf ball that can travel a longer flight distance, increased back spin, ease of control and pleasant feel.

Regarding the limitation of a golf ball diameter being in the range of 1.58 to 1.78 inches, it would have been obvious to manufacture the golf ball of Lutz with a diameter of the golf ball being within the above range since applicants clearly discloses that golf balls with the above range are well known in the art (balls #1 - #5), furthermore the above diameter range is known to a be standard range for golf balls diameters.

Additionally, since Lutz is clearly concerned with the Moment of Inertia of his golf ball (col. 8, lines 49-51) it would have been obvious to provide a golf ball with a calculated Moment of Inertia from 12.4 to 13.4 (g-in^2) for the purpose of providing a with a good spin rate and spin decay, especially since golf balls with a moment of inertia in the above range are known in the art (i.e. applicants Table – 2, Ball #1) and since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Regarding the volume percentage of a high specific gravity thread being within the range of 0.1 to 10%, it would have been obvious to manufacture the golf ball of Lutz with the above range since the it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller,* 105 USPQ 233.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lutz et al '104 in view of Kakiuchi et al '142 and applicant's own admission, as stated above, and further in view of Nakahara et al '253. Lutz, as modified by Kakiuchi and applicants own admission, lacks the explicit teaching of a core having a specific gravity of 1.0 to 1.2. However, Nakahara et al discloses that it is known to provide a golf ball with a core having a specific gravity within the above range (see abstract). Therefore it would have been obvious to manufacture the golf ball of Kutz, as modified by Kakiuchi and applicants own admission, with a core having a specific gravity in the range of 1.0 to 1.2

for the purpose of providing a golf ball with an excellent rebound coefficient without any damage to the durability of the golf ball.

Response to Arguments

Applicant's arguments filed 3/12/2004 have been fully considered but they are not persuasive. Applicants argue that applicants declaration submitted under Rule 131 removes the Lutz reference as prior art, in response the examiner directs the applicants attention to the remarks in the above office action directed to the submission of the declaration. Applicants further appear to argue hindsight reasoning, in response the examiner points out that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicants further argue that Lutz teaches a layer that uses a high specific gravity filler and not the applicants claimed "...at least one thread..." and that applicants thread is compounded with the high specific gravity filler. In response the examiner points out that Lutz teaches that a thread layer is known to be comprised of a single thread wrapped about a center (col. 1, lines 47-48) and that his invention envisions forming a thread by contacting the thread with a liquid impregnation material which can contain a

high gravity filler (including tungsten) (see col. 5, lines 29-34). Thus the thread of Lutz is compounded with a high specific gravity filler to form a single thread which it this case would comprise a basic thread material (i.e. polyisoprene) and a high specific gravity filler (i.e. tungsten) which is then in turn wrapped about a golf ball center. Therefore the examiner maintains his rejection as stated above.

Regarding applicants arguments that the specific gravity of the thread being above 1.2 is not a design choice but rather a critical aspect of the invention, the examiner directs the applicants attention to the above rejection which states that it appears that applicants disclose that their invention will work equally well with a thread having a specific gravity in the range of 0.94 to above 1.2. In which case it does appear that the specifics that a thread have a specific gravity above 1.2 is a design choice as applicants have failed to demonstrate any benefit to the value since they clearly admit that the playability of the golf ball will function equally well when the specific gravity is less than 1.2.

The double patenting rejection is hereby withdrawn due to applicants arguments found in pages 21 and 22 of the response filed on 3/12/2004.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Suhol whose telephone number is 703-305-0085. The examiner can normally be reached on Mon - Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 703-308-1745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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